

**REMARKS**

Favorable consideration and allowance are respectfully requested for claims 1-7 in view of the following remarks.

The rejection of claims 1-5 and 7 under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a) over JP 11-228177 ("Ubuichi") as evidenced by Optel Vision and the rejection of claim 6 under 35 U.S.C. § 103(a) over Ubuichi are each respectfully traversed.

Independent claim 1 recites in an automotive window glass having a ceramic color layer formed thereon, the automotive window glass being characterized in that a ceramic color layer is formed on an entire surface or part of the automotive window glass by using a ceramic color paste containing a green-color pigment in an amount of 30-80wt% relative to 100wt% of a total of a black-color pigment and the green-color pigment, and that, in an  $L^*a^*b^*$  color system, a transmitted color of the glass has a value of  $a^*$  of  $-10.0$  to  $0.0$ , and a reflected color of the ceramic color layer, which is observed from a vehicle exterior side through the glass has  $L^* \leq 30.0$ ,  $-10.0 \leq a^* \leq 0$ , and  $-2 \leq b^* \leq 8$ , wherein the visible light transmittance of the ceramic layer is 0.3% or lower and the ultraviolet light transmittance of the ceramic layer is 0.1% or lower.

In contrast, Ubuichi discloses a ceramic color composition containing a powdery solid component consisting of 70-99 wt.% black low melting point glass powder and 1-30 wt.% inorganic pigment, and 35-100 parts by weight of an organic vehicle based on 100 parts by weight of the solid component. The black low melting point glass powder is preferably obtained by incorporating 1-20 wt.% one or more coloring components selected from CuO, CoO, MnO, Cr<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, Ni<sub>2</sub>O<sub>3</sub>, Co<sub>3</sub>O<sub>4</sub> and FeS into an ordinary low melting point glass powder. (Abstract).

The Office Action cites, in particular, the ceramic color composition of Example 1 of Ubuichi. The indication on page 3 of the Office Action that the Cr<sub>2</sub>O<sub>3</sub>, CuO and MnO of Example 1 of Ubuichi, listed in Table 1, make up a "Greenish black pigment" is incorrect. Rather, the Cr<sub>2</sub>O<sub>3</sub>, CuO and MnO of

Example 1 of Ubuichi, listed in Table 1, are **coloring components** added during the batching stage of the glass forming process. (See Paragraph [0017] of Ubuichi). These coloring components are homogeneously distributed, diffused or dissolved in the resulting low melting point glass of Ubuichi to uniformly add **a black color** to the low melting point glass. Thus, the low melting point glass of Ubuichi is a **black** low melting point glass.

More specifically, Ubuichi discloses that a batch raw material mixture of Example 1 containing coloring components (*i.e.*, Cr<sub>2</sub>O<sub>3</sub>, CuO and MnO) was melted in a temperature range of 1200 to 1250°C, followed by quenching (rapid cooling) in water, wet grinding in water, drying, and grinding, to prepare a black low melting point glass powder. (See Paragraph [0035]). Then, the black low melting point glass powder was mixed with an inorganic pigment (a black pigment of Cr<sub>2</sub>O<sub>3</sub>, CuO and MnO), and an organic vehicle to prepare a ceramic color paste composition sample. (See Paragraphs [0036]-[0038] of Ubuichi). The coloring components added during the batching stage of the glass forming process do not correspond to the pigment(s) recited in independent claim 1.

As would readily be understood by a person of ordinary skill in the art, the term “pigment” (as used in independent claim 1) refers to a coloring powder. For example, Merriam-Webster Online defines the term “pigment” as “a substance that imparts black or white or a color to other materials; especially: a powdered substance that is mixed with a liquid in which it is relatively insoluble and used especially to impart color to coating materials (as paints) or to inks, plastics, and rubber”. (<http://www.merriam-webster.com/dictionary/pigment>; attached as Exhibit I). In contrast, according to Merriam-Webster Online the term “frit” (see, for example, paragraphs [0012], [0024], and [0028] and claims 2 and 3 of the present application) can refer to “any of various chemically complex glasses used ground especially to introduce soluble or unstable ingredients into glazes or enamels”. (<http://www.merriam-webster.com/dictionary/frit>; attached as Exhibit II).

As the coloring components are used to form a black low melting point glass powder, they are part of the "frit" of Ubuichi. The only "pigment" that Ubuichi discloses is black inorganic pigment of  $\text{Cr}_2\text{O}_3$ ,  $\text{CuO}$  and  $\text{MnO}$ . (See paragraph [0036] of Ubuichi). Therefore, the Office Action has erred in denoting the coloring components as "Greenish black pigment", and the inorganic pigment as "***Additional*** black pigment". (Emphasis Added; See Page 3 of the Office Action). Accordingly, the calculation on page 3 of the Office Action is also incorrect. Ubuichi does not disclose or suggest a green-color pigment (in addition to a black-color pigment). Ubuichi certainly does ***not*** disclose or suggest, *inter alia*, a ceramic color paste containing a green-color pigment in an amount of 30-80wt% relative to 100wt% of a total of a black-color pigment and the green-color pigment.

Rather, the use of the black inorganic pigment (*i.e.*, "Asahi Chemical Industry #3700 ( $\text{CuO}$ ,  $\text{Cr}_2\text{O}_3$ , and  $\text{MnO}$ )") according to paragraph [0036] of Ubuichi corresponds to Comparative Example 1 of the present application, wherein 100wt% of the pigment comprised a mixed black-color pigment of chromium oxide, copper oxide and manganese oxide (see paragraph 0029 of the present application). In Comparative Example 1 of the present application, the value of 0.5 of  $a^*$  in Table 1 was higher than the presently claimed range of  $-10 \leq a^* \leq 0$ . Thus, use of the black inorganic pigment of Ubuichi is excluded from the presently claimed automotive window glass.

As explained in the present application, the presently claimed ceramic color layer functions to conceal heat ray terminals, trim members and the like from a vehicle exterior. (See Paragraphs [0003] and [0006]). Because inclusion of a green pigment would lower black pigment content, as compared with the use of only a black pigment, and could adversely affect the concealing function, a person of ordinary skill in the art would not think to use a mixture of green and black pigments in order to fulfill a concealing function. The present inventors, however, have unexpectedly found that the presently claimed ceramic color paste containing a mixture of ***a green-color pigment in an amount of 30-80wt%***

and a black-color pigment (in an amount of 70-20wt%) does not adversely affect the concealing function and does not leave any uncomfortable feeling. (See Paragraph [0008] of the Present Application).

The Office Action asserts,

[O]ne would see that the pigments both concerning pigment type (color) and amount can be optimized to any color or amount and through routine experimentation . . . . Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Ubuichi to include that the pigment color used as well as the amount of pigment can be optimized . . . .

(Page 6).

A particular parameter must first be recognized as a result-effective variable before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6 (CCPA 1977). As Ubuichi does not disclose or suggest a ceramic color composition containing a green-color pigment, Ubuichi certainly does not recognize the amount of green-color pigment as a result-effective variable. Based on the teachings of Ubuichi, a person of ordinary skill in the art would not have any reasoned basis for using a green-color pigment in the specifically claimed amount.

Further, in a case such as this, where Applicants have discovered an optimum composition which yields especially advantageous results, it is incumbent upon an Examiner alleging obviousness to provide evidence or scientific reasoning to support an assertion that one of ordinary skill in the art would be led to arrive at such results by routine experimentation or that such results would be inherent in the prior art. *Ex parte Whalen*, 89 USPQ2d 1078 (Bd. Pat. App. & Int. 2008). The Examiner has not provided any evidence or scientific reasoning to support the assertion that one of ordinary skill in the art would be led to arrive at the specifically claimed amount of green-color pigment by routine experimentation. Accordingly, the Examiner has failed to make out a *prima facie* case of obviousness.

For the foregoing reasons, reconsideration and withdrawal of the rejection of claims 1-5 and 7 over Ubuichi as evidenced by Optel Vision and the rejection of claim 6 over Ubuichi are therefore respectfully requested.


In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket No. 038788.57892US).


Respectfully submitted,

May 1, 2009

  
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# Exhibit I



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2 pigment (transitive verb)  
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**Main Entry: 1 pigment**  
Pronunciation: ˈpig-mənt  
Function: noun  
Etymology: Middle English, spice, dye, from Latin *pigmentum* coloring substance, from *pingere* to paint — more at **paint**  
Date: 14th century

1 : a substance that imparts black or white or a color to other materials ; especially : a powdered substance that is mixed with a liquid in which it is relatively insoluble and used especially to impart color to coating materials (as paints) or to inks, plastics, and rubber  
2 : a coloring matter in animals and plants especially in a cell or tissue ; also : any of various related colorless substances  
— **pig-men-tary** ˈpig-mən-ter-ē adjective

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Pronunciation Symbols

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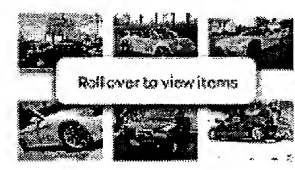
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<sup>2</sup>frit (transitive verb)

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**Main Entry:** 'frit 40  
**Pronunciation:** 'frit  
**Function:** noun  
**Etymology:** Italian *fritta*, from feminine of *fritto*, past participle of *friggere* to fry, from Latin *frigere* to roast — more at **frx**  
**Date:** 1661


1 : the calcined or partly fused materials of which glass is made  
2 : any of various chemically complex glasses used ground especially to introduce soluble or unstable ingredients into glazes or enamels

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'frit.' (2009). In Merriam-Webster Online Dictionary.  
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